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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,046	04/26/2001	Toshitaka Shibata	14998.270	8913

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EXAMINER	
BELLAMY, TAMIKO D	
ART UNIT	**PAPER NUMBER**
2856	

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/843,046	SHIBATA ET AL.	
	Examiner	Art Unit	
	Tamiko D. Bellamy	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Amendment dated 2/23/04 has been received and entered. Claim 2 has been canceled. Claims 1, and 3-9 are currently pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3-7, 8/1, and 9 are rejected under 35 U.S.C. 103(a) as being obvious over Nomura et al. (5,948,991) in the view of Nitta (JP 62194341 A).

With respect to claim 1, Nomura et al. discloses in Figs. 3, 8 5, and 15 a base (e.g., block 122), a pressure injection section (e.g., pressure introduction hole 30a), and a lead (16) connected to a pressure-sensitive section (e.g., sensor chip 11). The device of Nomura et al. discloses the pressure sensitive element (e.g., sensor chip 11) is fixedly adhered onto a base (e.g., resin block 3) by a resin adhesive agent (14) (col. 4, lines 21-24). Nomura et al. also discloses a pressure-sensitive section (130) enclosed by a sensor package (133, 137). Nomura et al. lacks the detail of the affixing by the use of a fluoric elastomer. Nitta discloses the use of a fluoric elastomer (e.g., tetrafluoroethylene resin) Therefore, to modify Nomura et al. by employing a fluoric elastomer would have been obvious to one of ordinary skill in the art at the time of the invention since Nitta teaches a pressure sensor having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Nomura et al. and Nitta since Nomura et al. states

that his invention is applicable to pressure sensor for detecting pressure intake in an engine and Nitta is directed to pressure sensor unit.

With respect to claim 3, Nomura et al. discloses in Fig. 8 a gel-like silicon resin (132) that covers the pressure-sensitive section (e.g., pressure sensor chip 130) (col. 7, lines 24-28, col. 9, lines 38-46). Nomura et al. also discloses a lead (131) connected to the terminal of the pressure-sensitive section (130)(col. 10, lines 1-8). As depicted in fig. 1, the lead (1310 is connected to the base, and the gel-like silicon resin (132) covers a portion of lead (132) and covers all of the pressure-sensitive section (e.g., pressure sensor chip 130).

With respect to claim 4, Nomura et al. discloses in figs. 3 and 6 a gel-like protective member (15) on the pressure-sensitive section (e.g., sensor chip 11). The gel-like is from the silicone resin group (15/132) (col. 7, lines 26-28). Nomura et al. does not specifically state the use of a fluoric gel. However the court held in, In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960), that selection of a known material based upon its suitability for the intended use is a design consideration clearly within the preview of one having ordinary skill of the art. Therefore, to modify Nomura et al. on a fluoric gel would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches its use on pressure sensor for detecting pressure intake in an engine that includes a gel-like protective member on the pressure-sensitive section (e.g., sensor chip 11).

With respect to claims 5-7, Nomura et al. discloses in figs. 3 and 6 a gel-like protective member (15) on the pressure-sensitive section (e.g., sensor chip 11). Nomura

et al. also discloses that the pressure sensitive element (e.g., sensor chip 11) is fixedly adhered onto a base (e.g., resin block 3) by a resin adhesive agent (14) (col. 4, lines 21-24). The gel-like protective member is from the silicone resin group (15/132) (col. 7, lines 26-28). Nomura et al. does not specifically state that the fluoric elastomer is harder that the fluoric gel. Nitta discloses the use of a gel-like resin that covers the pressure sensor chip. Nitta also discloses that the such as silicone that comes to a gel-like state after curing. Nitta also discloses the use of a fluoric elastomer (e.g., tetrafluoroethylene resin). The teachings of Nitta clearly infer and/or suggest that the fluoric elastomer (e.g., tetrafluoroethylene resin) is harder than the gel-like resin that covers the pressure sensor chip. Therefore, to modify Nomura et al. by employing a fluoric elastomer that is harder than a fluoric gel would have been obvious to one of ordinary skill in the art at the time of the invention since Nitta teaches a pressure sensor having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Nomura et al. and Nitta since Nomura et al. states that his invention is applicable to pressure sensor for detecting pressure intake in an engine and Nitta is directed to pressure sensor unit.

With respect to claims 8\3 and 9, Nomura et al. discloses a pressure sensor (121) used for detecting an air intake of an engine (col. 6, lines 9-19).

Response to Remarks

4. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection. It is the examiners position that claims 1-9 are not patentable over the newly applied art of Nomura et al. in view of Nitta.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamiko D. Bellamy whose telephone number is (571) 272-2190. The examiner can normally be reached on Mondays, Tuesdays, & Fridays 6:30 AM to 3:30PM; and on Wednesdays and Thursdays the examiner 6:30 AM to 11:30 AM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tamiko Bellamy
T.B.
April 13, 2004

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